SYSTEM CONFIGURATION

AN OPERATING SYSTEM IS NOT INCLUDED AS A PART OF THE SYSTEM.

MINIMUM SYSTEM CONFIGURATION

Z-80A SYSTEM

- ZPU OR DPU PROCESSOR BOARD
- 64KZ MEMORY BOARD
- 64FDC FLOPPY DISK CONTROLLER BOARD

68000 SYSTEM

- DPU PROCESSOR BOARD
- 256KZ MEMORY BOARD
- 64FDC FLOPPY DISK CONTROLLER BOARD

SYSTEM Ø

(CSØ)

- 4 SLOT S-1ØØ BUS
- SCC
- MCB-216 (MONITOR/CONTROL BASIC)
- CBL-1 (QTY 1)

SYSTEM 1

(CS1)

- 8 SLOT S-100 BUS
- ZPU; 64KZ-II; 64FDC
- TWO 390K TANDON 5" DISK DRIVES
- CBL-1 (QTY 1)

(CS1H)

- 8 SLOT S-100 BUS
- ZPU; 64KZ-II; 64FDC; WDI-II
- ONE 390K TANDON 5" DISK DRIVE
- ONE 20 MB IMI 5" HARD DISK
- CBL-1 (QTY 1)

SYSTEM 1

(CONTINUED)

(CS1D2)

- 8 SLOT S-100 BUS
- DPU; 256KZ; 64FDC
- TWO 390K TANDON 5" DISK DRIVES
- CBL-1 (QTY 1)

(CS1D5E)

- 8 SLOT S-100 BUS
- DPU; MCU; 512MSU; 16FDC
- TWO 390K TANDON 5" DISK DRIVES
- CBL-1 (QTY 1)

SYSTEM 1

(CONTINUED)

(CS1HD2)

- 8 SLOT S-100 BUS
- DPU; 256KZ; 64FDC; WDI-II
- ONE 390K TANDON 5" DISK DRIVE
- ONE 20 MB IMI 5" HARD DISK
- CBL-1 (QTY 1)

(CS1HD5E)

- 8 SLOT S-100 BUS
- DPU; MCU; 512MSU; 64FDC; WDI-II
- ONE 390K TANDON 5" DISK DRIVE
- ONE 20 MB IMI 5" HARD DISK
- CBL-1 (QTY 1)

SYSTEM TWO

(Z2X)

- 21 Slot S-100 Bus
- No Boards or Storage Devices

(CS2)

- 21 Slot S-100 Bus
- ZPU; 64KZ-II; 64FDC
- Two 390K Tandon 5" Disk Drives
- CBL-2 (qty 1)

SYSTEM TWO

(CONTINUED)

(CS2D5E)

- 21 SLOT S-100 BUS
- DPU; MCU; 512MSU; 64FDC
- TWO 390K TANDON 5" DISK DRIVES
- CBL-2 (QTY 1)

(CS2D2) SEE (CS1D2)

(CS2H) SEE (CS1H)

(CS2HD2) SEE (CS1HD2)

(CS2HD5E) SEE (CS1HD5E)

SYSTEM THREE

(CS3A)

- 21 SLOT S-100 BUS
- ZPU; 64KZ-II; 64FDC
- TWO 1.2 MB TANDON 8" DISK DRIVES
- CBL-3 (QTY 1)

(CS3H)

- 21 SLOT S-100 BUS
- ZPU; 64KZ-II; 64FDC; WDI-II
- ONE 1.2 MB TANDON 8" DISK DRIVE
- ONE 20 MB IMI 5" HARD DISK
- CBL-3 (QTY 1)

(CS3D2) SEE (CS1D2)

(CS3D5E) SEE CS1D5E)

(CS3HD2) SEE (CS1HD2)

(CS3HD5E) SEE (CS1HD53)

Cromemco®

SYSTEM CONFIGURATION GUIDES

Z-80 System Configuration Guide

	CDOS 1-USER	CROMIX 1-USER	CROMIX 2-USERS	CROMIX 3-USERS
System Boards	ZPU 64FDC 64KZ-II	ZPU 64FDC 256KZ *	ZPU 64FDC 256KZ *	ZPU 64FDC 256KZ *
Serial Ports	1 port standard on 64FDC	1 port standard on 64FDC	TUART or IOP and # QUADART	TUART or IOP and # QUADART
Cables	CBL-1 (2)	CBL-1 (2) CBL-0	CBL-1 (3) CBL-0	CBL-1 (4) CBL-0
Hard Disk Storage **	HD-20 includes WDI-II	HD-20 includes WDI-II	HD-20 includes WDI-II	HD-20 includes WDI-II
9-Track Tape Storage **	TDS % includes IOP and CSP	TDS % includes IOP and CSP	TDS % includes IOP and CSP	TDS % includes IOP and CSP
Software	none	CROMIX included	CROMIX included	CROMIX included

\# - IOP/QUADART's include necessary "C-Bus" cables except for 5 or more users you must order: 1 ea 519-0101.
- Each QUADART occupies two slots
- Improved CRT performance is possible by using IOP/QUADART's instead of TUARTS.

* - These configurations are possible using 64KZ-II's; however, more slots will be used which may preclude the use of IOP/QUADART or TDS.

% - TDS requires its own IOP

( )- Quantities are one except where denoted by ( )

** - Mass storage options include all necessary cables

Note 1: Substitute CBL-2 for CS-2's or CBL-3 for CS-3's.
Note 2: Hard disk is recommended for multi-user configurations
Note 3: If printer is required, a PRI or TUART must be included.

	CROMIX 4-USERS	CROMIX 5-USERS	CROMIX 6-USERS
System Boards	ZPU 64FDC 256KZ (2) $	ZPU 64FDC 256KZ (2) $	ZPU 64FDC 256KZ (2) $
Serial Ports	TUART (2) or IOP and # QUADART	TUART (2) or IOP and # QUADART	TUART (3) or IOP and # QUADART (2)
Cables	CBL-1 (5) CBL-0	CBL-1 (6) CBL-0	CBL-1 (7) CBL-0
Hard Disk Storage **	HD-20 includes WDI-II	HD-20 includes WDI-II	no bus slots available for CS-1
9-Track Tape Storage **	no bus slots available for CS-1	no bus slots available for CS-1	no bus slots available for CS-1
Software	CROMIX included	CROMIX included	CROMIX included

\# - IOP/QUADART's include necessary "C-Bus" cables
except for 5 or more users you must order: 1 ea 519-0101.
- Each QUADART occupies two slots
- Improved CRT performance is possible by using IOP/QUADART's instead of TUARTS.

$ - When using a second 256KZ order:
(1 ea 502-0048 74948 and 1 ea 502-0049 74949)

( )- Quantities are one except where denoted by ( )

** - Mass storage options include all necessary cables

Note 1: Substitute CBL-2 for CS-2's or CBL-3 for CS-3's.
Note 2: Hard disk is recommended for multi-user configurations
Note 3: If printer is required, a PRI or TUART must be included.

68000 System Configuration Guide

	CROMIX-D 1-USER	CROMIX-D 2-USERS	CROMIX-D 3-USERS
System Boards	DPU 64FDC 256KZ (1+) or MCU and * 512 MSU (1+)	DPU 64FDC 256KZ (1+) or MCU and * 512 MSU (1+)	DPU 64FDC 256KZ (2+) or MCU and 512 MSU (1+)
Serial Ports	use 64FDC or add IOP and # QUADART	TUART or IOP and # QUADART	TUART or IOP and # QUADART
Cables	CBL-1 (2) CBL-0	CBL-1 (3) CBL-0	CBL-1 (4) CBL-0
Hard Disk Storage **	HD-20 includes WDI-II	HD-20 @ includes WDI-II	HD-20 @ includes WDI-II
9-Track Tape Storage **	TDS % includes IOP and CSP	TDS %@ includes IOP and CSP	TDS %@ includes IOP and CSP
Software	none	none	none

\# - IOP/QUADART's include necessary "C-Bus" cables except for 6 or more users you must order: 1 ea 519-0101.
- Each QUADART occupies two slots
- Improved CRT performance is possible by using IOP/QUADART's instead of TUARTS.

* - These configurations are possible using MCU/MSUs; however, more slots will be used. This may preclude the selection of other options.

% - TDS requires its own IOP

@ - Insufficient bus slots may be present in a CS-1 for this option depending on other options selected.

( )- Quantities are one except where denoted by ( ) Quantity shown assumes minimum of 64K bytes per user. More will be needed to run 68000 software.

** - Mass storage options include all necessary cables

	CROMIX-D 4-USERS	CROMIX-D 5-USERS	CROMIX-D 6-USERS
System Boards	DPU 64FDC 256KZ (2+) or MCU and 512 MSU (1+)	DPU 64FDC 256KZ (2+) or MCU and 512 MSU (1+)	DPU 64FDC 256KZ (2+) or MCU and 512 MSU (1+)
Serial Ports	TUART (2) or IOP and # QUADART	TUART (2) or IOP and # QUADART	TUART (3) or IOP and # QUADART (2)
Cables	CBL-1 (5) CBL-0	CBL-1 (6) CBL-0	CBL-1 (7) CBL-0
Hard Disk Storage **	HD-20 @ includes WDI-II	HD-20 @ includes WDI-II	no bus slots available for CS-1
9-Track Tape Storage **	no bus slots available for CS-1	no bus slots available for CS-1	no bus slots available for CS-1
Software	none	none	none

\# - IOP/QUADART's include necessary "C-Bus" cables except for 6 or more users you must order: 1 ea 519-0101.
- Each QUADART occupies two slots
- Improved CRT performance is possible by using IOP/QUADART's instead of TUARTS.

@ - Insufficient bus slots may be present in a CS-1 for this option depending on other options selected.

( )- Quantities are one except where denoted by ( ) Quantity shown assumes minimum of 64K bytes per user. More will be needed to run 68000 software.

** - Mass storage options include all necessary cables

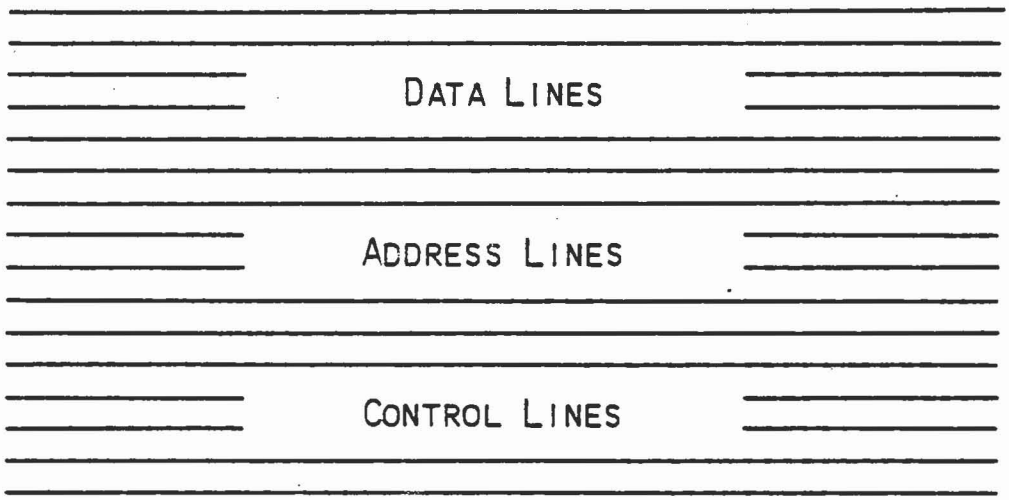
Note 1: Substitute CBL-2 for CS-2's or CBL-3 for CS-3's.
Note 2: A hard disk is recommended for multi-user configurations.
Note 3: If printer is required, a PRI or TUART must be included.

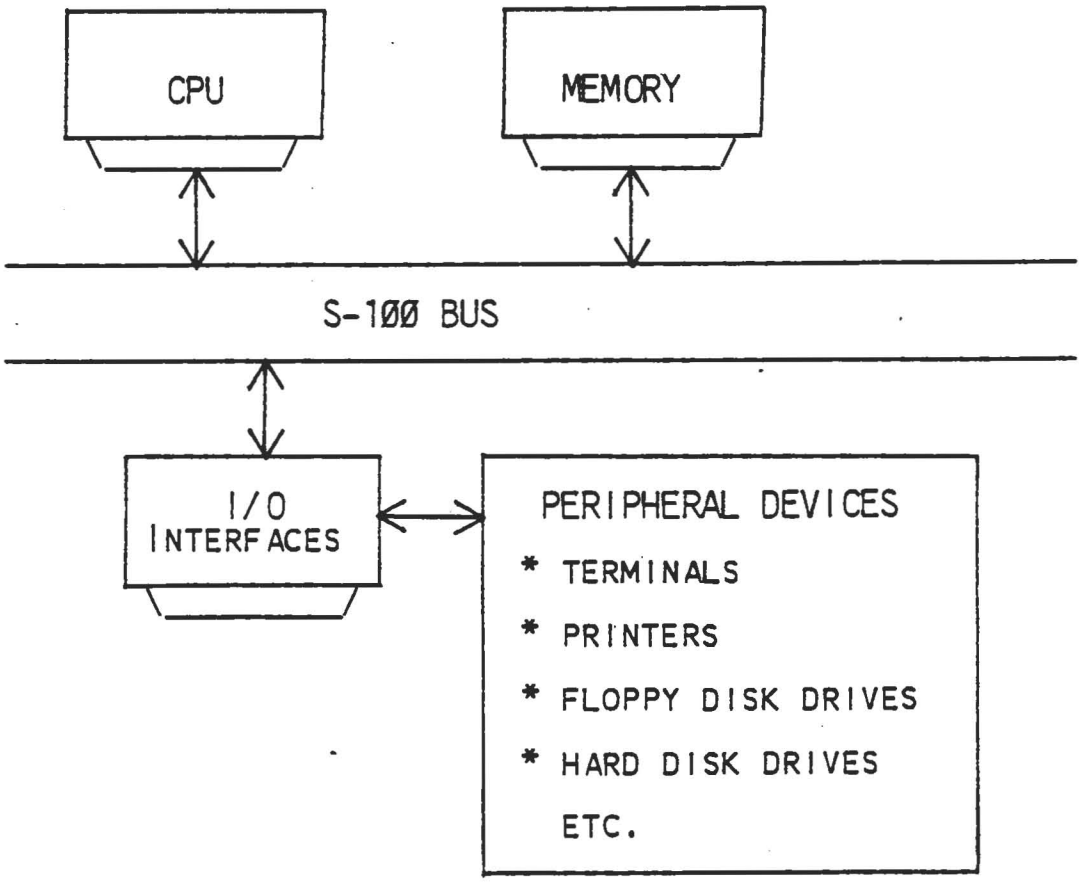
CROMEMCO'S
PRODUCT LINE
(PRINTED CIRCUIT BOARDS)

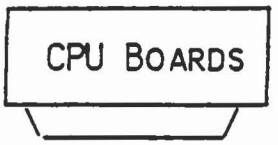
FOUR ELEMENTS
MAKE UP A COMPUTER SYSTEM

- C P U
- MEMORY
- I/O CONTROL
- PERIPHERALS

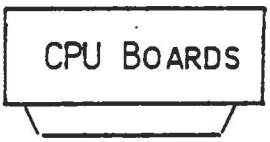
S-100 BUS




CPU
MEMORY
S-100 BUS
I/O
INTERFACES
PERIPHERAL DEVICES
* TERMINALS
* PRINTERS
* FLOPPY DISK DRIVES
* HARD DISK DRIVES
ETC.



- ZPU
- SCC
- DPU



ZPU

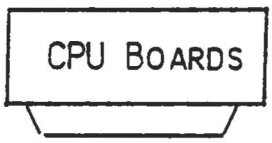
- Z-80A BASED
- 4 MHZ CLOCK
- 158 INSTRUCTIONS
- POWER-ON JUMP
- 0-4 WAIT STATES

CPU Boards

Single Card Computer (SCC)

- Z-80A Based
- 8 KBytes ROM
- 1 KBytes RAM
- 1 Serial I/O Port
- 3 Parallel I/O Port
- 5 Interval Timers

? CDOS
? System Zero
now
& Control Basic



DUAL PROCESSOR UNIT

(DPU)

- Z-80A PROCESSOR
- 68000 PROCESSOR
  - 16/32 BIT
  - 8 MHZ CLOCK
- SOFTWARE CONTROLLED SWITCHING

SINGLE PORT RAM

SINGLE PORT ROM

TWO PORT RAM

SINGLE PORT RAM

- 16K BYTE RAM (16KZ)
- 64K BYTE RAM (64KZ-11)
- 256K BYTE RAM (256KZ) – may run Cromemco 4 SDICromemco E PROMs in App Note

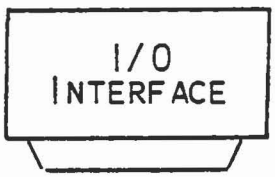
SINGLE PORT ROM

- 32K BYTESAVER (32KBS)

16 Bit Memory Boards

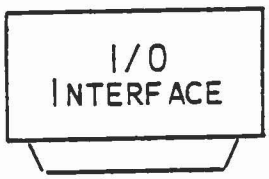
- Memory Controller Unit (MCU)
  - 512K ECC Memory (512MSU)
- 256K Memory (256KZ)

- FLOPPY DISK & CRT
- DUAL SERIAL & PARALLEL PORTS
- PRINTER
- ANALOG
- HARD DISK
- 8 PORT PARALLEL
- 4 PORT PARALLEL



FLOPPY DISK & CRT CONTROLLER

- SERIAL I/O PORT
  - 110 - 76,800 BAUD
- INTERVAL TIMERS
- DOUBLE SIDED & DENSITY CONTROLLER (16FDC)
  - FOUR 5" OR 8" DRIVES (8" PERSCI INTERFACE)
  - DIAGNOSTIC SOFTWARE
- DOUBLE SIDED & DENSITY CONTROLLER (64FDC)
  - FOUR 5" OR 8" DRIVES (8" SHUGART INTERFACE)
  - DIAGNOSTIC SOFTWARE
  - OPTIONAL BOOT FOR HARD DISK



DUAL SERIAL & PARALLEL PORTSS

(TRT)

- 2 SERIAL PORTS
  - 110 - 76,800 BAUD
  - RS-232 OR 20 MA CURRENT LOOP
- 2 PARALLEL PORTS
  - DRIVE UP TO 20 TTL LOADS
- 10 INTERVAL TIMERS
  - -0 - 16.32 MSEC. INTERVAL

is not a full RS232 implementation

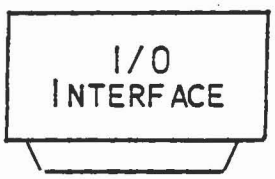
OKAY for Parallel printer

PRINTER INTERFACE

(PRI)

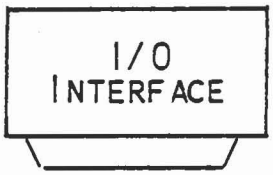
- DOT MATRIX PRINTER (CENTRONICS INTERFACE)
  - 3715
  - 3703
- FULLY FORMED CHARACTER PRINTER
  - 3355B

8 bit resolution



ANALOG-TO-DIGITAL
&
DIGITAL-TO-ANALOG
(D+7AI/O)

- 7 ANALOG-TO-DIGITAL INPUT PORTS
- 7 DIGITAL-TO-ANALOG OUTPUT PORTS
  - +2.54 TO -2.56 VOLT RANGE
  - 5.5 USEC. CONVERSION
  - 8 BIT RESOLUTION
- 1 PARALLEL I/O PORT



ANALOG-TO-DIGITAL

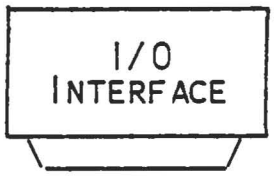
(ADC12)

via multiplexer full 12 bit

- 16 CHANNELS ANALOG-TO-DIGITAL
- 12 BIT RESOLUTION
- 2 CHANNELS PARALLEL I/O (HANDSHAKING)
- 25 USEC. CONVERSION TIME
- 5 ANALOG INPUT VOLTAGE RANGES

  +/- 2.5 +/-5 +/-10 0-5 0-10

all ports are the same

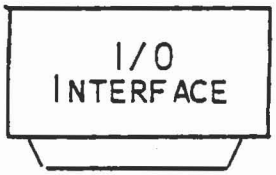


DIGITAL-TO-ANALOG

(DAC12)

each one has 2 chips

- 2 CHANNELS DIGITAL-TO-ANALOG
- 12 BIT RESOLUTION
- 2 CHANNELS PARALLEL I/O (HANDSHAKING)
- 5 USEC. CONVERSION TIME
- 5 ANALOG OUTPUT VOLTAGE RANGES
  +/-2.5 +/-5 +/-10 0-5 0-10

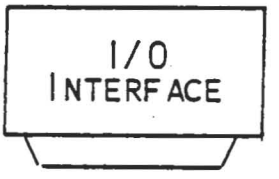


HARD DISK CONTROLLER

(WDI-II)

- USED TO CONTROL THE IMI 5" AND 8" HARD DISK DRIVES

20 meg and earlier

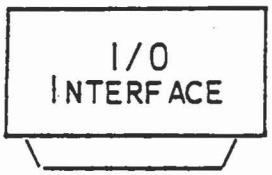


Board & Software 300.00
~~795~~ 795.00

SMD HARD DISK INTERFACE
(SMDI)

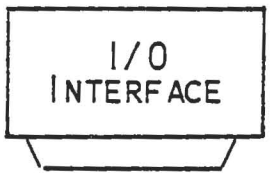
fixed & removable

- USED TO CONTROL 1 OR 2 CDC PHOENIX OR AN EQUIVALENT HARD DISK DRIVE.
- 80 MEGABYTE FIXED, 16 MEGABYTE REMOVAL
- 30 MS AVERAGE ACCESS TIME, 9.67 MHZ DATA TRANSFER RATE



8 PORT PARALLEL INTERFACE
(8PI/O)

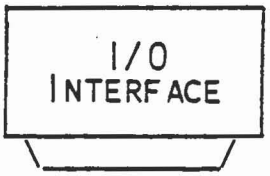
- 8 8 BIT PARALLEL I/O PORTS
- 2 BITS OPTO-ISOLATED INPUTS
- 2 BITS RELAY-ISOLATED OUTPUTS
  - 28 VOLT AC OR DC AT 1 AMP
  - SPDT CONTACTS



4-PORT ISOLATED PARALLEL INTERFACE

(4PI/O)

- 24 OPTO-ISOLATED INPUT BITS
- 16 OPTO-ISOLATED OUTPUT BITS
- 8 RELAY-ISOLATED OUTPUT BITS
- 11 OPTO-ISOLATED STROBE/HANDSHAKE BITS
- 1 OPTO-ISOLATED RESET BIT



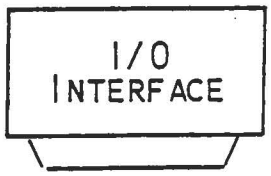
only about sample programs

GENERAL PURPOSE INSTRUMENT BUS
(GPIB)

- 4K BYTES RAM & UP TO 4K BYTES ROM
- INTERRUPT CAPABILITY
- IEEE-488 COMPATIBILITY
- 3 MODES OF OPERATION
    - CONTROLLER IN CHARGE
    - TALKER
    - LISTENER

Can only run one terminal

$395.00

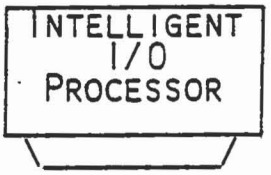


TERMINAL INTERFACE

(CTI)

(C-1 TERMINAL & KEYBOARD REQUIRED)

- 80 CHARACTERS X 25 LINES
- 25,000+ BAUD RATE
- 4 CHARACTER SETS
  - AMERICAN
  - AMERICAN BOLD
  - GRAPHIC
  - SCIENTIFIC



Heart of Networking & multi proc.

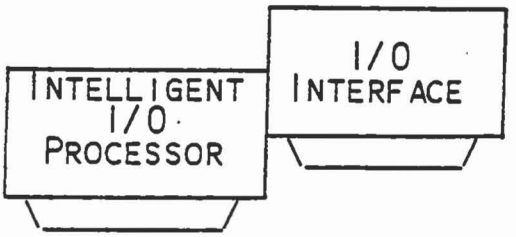
INTELLIGENT CONTROLLER

(INPUT/OUTPUT PROCESSOR)

(C-BUS CONTROLLER)

(IOP)

- 4 MHz Z-80A PROCESSOR
- 16K BYTES OF RAM
- UP TO 48K BYTES ROM
- 2 I/O PORTS OF HOST PROCESSOR
- MONITOR ROM INCLUDED
- SUPPORTS DOWNLOADING OF SOFTWARE



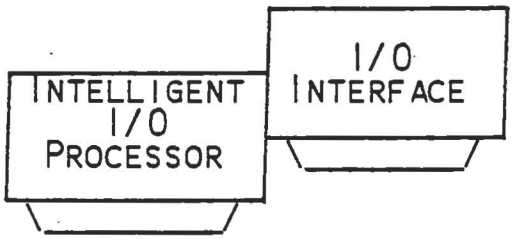
FOUR CHANNEL SERIAL INPUT/OUTPUT

(QDRT)

- IOP REQUIRED
- ASYNCHRONOUS BYTE
- SYNCHRONOUS BYTE
  BISYNC
- SYNCHRONOUS BIT
  SDLC
- FULL HANDSHAKING

full RS-232

All signals from C-Bus cabling to IOP



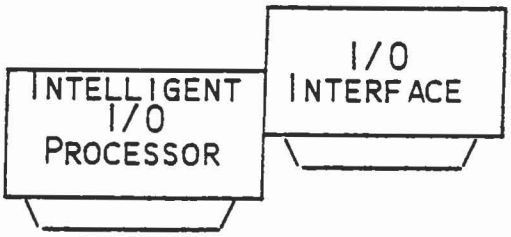
SERIAL/PARALLEL INTERFACE

(CSP)

- IOP REQUIRED
- PARALLEL INTERFACE

  9 TRACK TAPE DRIVE COMPATIBLE
- SERIAL INTERFACE

  RS232C CONNECTION



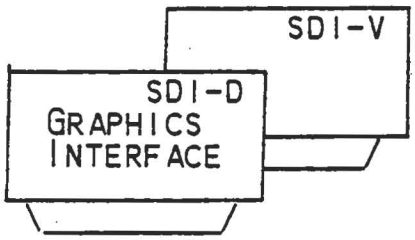
NETWORK INTERFACE

(CNI)

- 1 CP REQUIRED
- INTERFACE TERMINAL TO C-NET
- DATA TRANSFER RATES:

  TERMINAL 75-19,200 BAUD

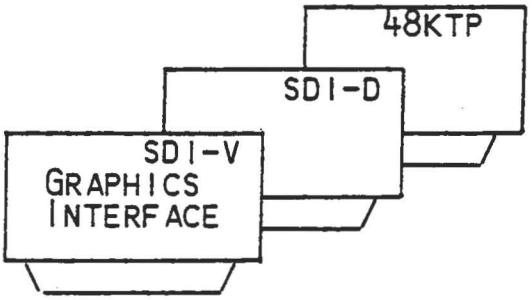
  NETWORK 880 KBPS



COLOR GRAPHICS INTERFACE

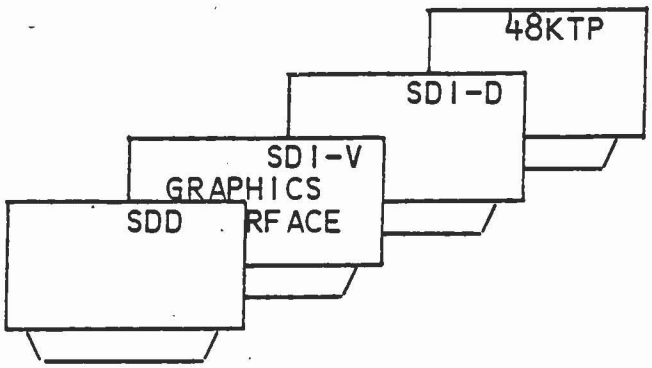
(SDI-D & SDI-V)

- UP TO 754 X 482 ELEMENT RESOLUTION
- MEETS NTSC BROADCAST STANDARDS *
- UP TO 4096 COLOR CHOICES AVAILABLE
- RGB OUTPUT



TWO PORT RAM

- 48K RAM (48KTP)



COLOR DIGITIZER BOARD (SDD)

WITH THE SDD INTERFACE AND A STANDARD TELEVISION CAMERA, IMAGES WITH UP TO 754 X 482-POINT RESOLUTION CAN BE DIGITIZED IN 1 TO 8 SECONDS AND STORED IN MEMORY OR ON DISK.